

Attorney's Docket No. 5770.21

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Bastiaan Driehuys et al.

Examiner: Michael G. Hartley

Serial No.: 09/804,369

Group Art Unit: 1616

Filed: March 12, 2001

For: **DIAGNOSTIC PROCEDURES USING DIRECT INJECTION OF GASEOUS
HYPERPOLARIZED ^{129}Xe AND ASSOCIATED SYSTEMS AND PRODUCTS**

November 7, 2002

Commissioner for Patents
Washington, DC 20231**AMENDMENT**

Sir:

In the claims:

Please cancel Claim 2 and Claims 24-88 without prejudice thereto.

Please replace the below amended claims for the pending claims of like number pursuant to
37 CFR 1.121.

A 2 1. (Amended) A method of screening for the presence of a pulmonary embolism,
comprising the steps of:

positioning a subject having a pulmonary region and a blood circulation path
including veins and arteries in an NMR system, the subject's pulmonary region having
pulmonary veins and pulmonary arteries and associated vasculature defining a pulmonary
portion of the circulation path;

injecting a first quantity of polarized gaseous phase ^{129}Xe directly into at least one
vein of the subject, wherein the first quantity of polarized gaseous phase ^{129}Xe is less than
about 100 cubic centimeters;

obtaining NMR signal data associated with the injected polarized ^{129}Xe in the
pulmonary region of the subject, the signal data including information corresponding to the
polarized gas introduced in said injecting step;

generating an MRI image having spatial visual representation of the NMR signal data
of the injected polarized ^{129}Xe ; and